

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Applicants:** Roland Contreras, et al.      **Examiner:** Unassigned  
**Serial No.:** To Be Assigned      **Art Unit:** Unassigned  
**Filed:** Herewith      **Docket:** 13748Z  
**For:** PROTEIN GLYCOSYLATION  
MODIFICATION IN METHYLOTROPHIC  
YEAST      **Dated:** September 25, 2003

Commissioner for Patents  
P. O. Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with the provisions of 37 C.F.R. §§1.97 and 1.98, it is respectfully requested that the following disclosures, which are listed on the attached form PTO-1449 be made of record in the above-identified case.

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**CERTIFICATE OF MAILING BY "EXPRESS MAIL"**

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I hereby certify that this is being deposited with the United States Postal Service "Express Mail Post Office to Addressee" service under 37 C.F.R. §1.10 on the date indicated above and is addressed to the Commissioner of Patents and Trademarks, P. O. Box 1450, Alexandria, VA 22313-1450.

Dated: September 25, 2003

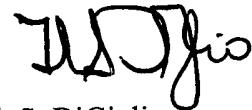
  
Frank S. DiGilio

Pursuant to 37 C.F.R. §1.98(d), copies of the above-listed publications are not provided, as the references were previously submitted to the Examiner in connection with the parent case, Serial Number: 09/896,594 filed on June 29, 2001. Reference Numbers 10 and 14-20 were cited by the Examiner in the parent case, Serial Number 09/896,594, therefore copies of these references are not provided.

Consideration of this Information Disclosure Statement is respectfully requested, since the art provided may be material to the examination of the present application as defined under 37 C.F.R. §1.56.

Inasmuch as this Information Disclosure Statement is being mailed prior to the issuance of a first Official Action, no fee or certification is required.

Respectfully submitted,



Frank S. DiGiglio  
Registration No. 31,346

SCULLY, SCOTT, MURPHY & PRESSER  
400 Garden City Plaza  
Garden City, New York 11530  
(516) 742-4343

FSD/XZ:ab

Form PTO-1449 U.S. DEPARTMENT OF COMMERCE (REV. 7-80) PATENT AND TRADEMARK OFFICE			Atty. Docket No. 13748Z	Serial No. To Be Assigned			
<b>LIST OF PRIOR ART CITED BY APPLICANT</b>  (Use several sheets if necessary)			Applicant Roland Contreras, et al.				
			Filing Date Herewith	Group			
<b>U.S. PATENT DOCUMENTS</b>							
EXAMINER INITIAL*		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (if appropriate)
	1	5,705,616	1/6/1998	Lehle et al.			
	2	5,135,854	8/4/1992	MacKay et al.			
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION
							YES      NO
	3	8-336387	12/24/1996	Japan			
<b>OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	4	Maras, M., et al. (2000) "Molecular Cloning and Enzymatic Characterization of a Trichoderma Reesi, 1, 2 - $\alpha$ -D-Mannosidase", <u>Journal of Biotechnology</u> 77: 255-263					
	5	Bretthauer, R. K., et al. (1999) "Glycosylation of <i>Pichia pastoris</i> -derviced Proteins", <u>Biotechnol. Appl Biochem</u> 30: 193-200					
	6	Kukuruzinska, M. A., et al. (1987) "Protein Glycosylation in Yeast", <u>Ann. Rev. Biochem</u> 56: 915-944					
	7	Chiba, Y., et al. (1998) "Production of Human Cmpatible High Mannose-Type (Man <sub>5</sub> GlcNAc <sub>2</sub> ) Sugar Chains in <i>Saccharomyces Cerevisiae</i> ", <u>The Journal of Biological Chemistry</u> 273 (41): 26298-26304					
	8	Maras, M., et al. (1999) "In Vivo Synthesis of Complex N-Glycans by Expression of Human N-Acetylglucosaminyltransferase I in the Filamentous Fungus Trichoderma Reesei", <u>FEBS Letters</u> 452: 365-370					
	9	Nakanishi-Shindo, Y., et al. (1993) "Structure of the N-Linked Oligosaccharides That Show the Complete Loss of $\alpha$ -1, 6-Polymannose Outer Chain from och1, och1 mnn1, and och1 mnn1 alg3 Mutants of <i>Saccharomyces Cerevisiae</i> ", <u>The Journal of Biological Chemistry</u> 268 (35): 26338-26345					
EXAMINER			DATE CONSIDERED				
<p>* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</p>							

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**U.S. PATENT DOCUMENTS**

EXAMINER INITIAL*		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (if appropriate)
	10	US- 2002/0137134/A1	09-2002	Gerngross			

**FOREIGN PATENT DOCUMENTS**

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
							YES	NO

**OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)**

11	Martinet, W., et al. (1998) "Modification of the Protein Glycosylation Pathway in the Methylotrophic Yeast <i>Pichia pastoris</i> ", <u>Biotechnology Letters</u> 20(12):1171-1177
12	Maras, M., et al. (1997) "In Vitro Conversation of the Carbohydrate Moiety of Fungal Glycoproteins to Mammalian-Type Oligosaccharides", <u>Eur. J. Biochem.</u> 249:701-7707
13	Laroy, W., et al. (2000) "Cloning of <i>Trypanosoma cruzi</i> trans-Sialidase and Expression in <i>Pichia pastoris</i> ", <u>Protein Expression and Purification</u> 20: 389-393
14	Inoue et al. Molecular cloning and nucleotide sequence of the 1,2-alpha-D-mannosidase gene, msdS, from <i>Aspergillus saitoi</i> and expression of the gene in yeast cells. <u>Biochim. Biophys. Acta</u> 1253:141-145, 1995
15	Herscovics et al. Isolation of a mouse Golgi mannosidase cDNA, a member of a gene family conserved from yeast to mammals. <u>J. Biol. Chem.</u> 269:9864-9871, 1994
16	Lal et al. Isolation and expression of murine and rabbit cDNAs encoding an alpha 1,2-mannosidase involved in the processing of asparagines-linked oligosaccharides. <u>J. Biol. Chem.</u> 269:9872-9881, 1995.
17	Trombetta et al. Endoplasmic reticulum glucosidase II is composed of a catalytic subunit, conserved from yeast to mammals, and a tightly bound noncatalytic HDEL-containing subunit. <u>J. Biol. Chem.</u> 271:27509-27516, 1996

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							YES      NO
<b>OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	18	Ngo et al. Computational complexity, protein structure prediction, and the Levinthal Paradox. IN: The protein folding problem and tertiary structure prediction (Merz et al., Eds.), Birkhauser, Boston, 1994, pages 491-495.					
	19	Rudinger, J. Characteristics of the amino acids as components of a peptide hormone sequence. In: Peptide hormones (Parsons, J.A., Ed.), University Park Press, Baltimore, 1976, pages 1-7.					
	20	Invitrogen catalog, 1998. Yeast expression, page 22.					
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